Pending Claims After Entry of Amendment Pursuant to 37 C.F.R. § 1.121 (c)(3)

5. (Amended) A method of inducing a protective or therapeutic immune response against Helicobacter in a mammal, said method comprising administering to said mammal an effective amount of a prophylactically or therapeutically effective *Helicobacter pylori* antigen by the subdiaphragmatic, systemic route.

6. (Amended) The method of Claim 5, in which a Th1-type immune response is induced by said subdiaphragmatic, systemic administration.

7. (Twice Amended) The method of Claim 6, in which the Th1-type immune response is characterized either (i) by a ratio of the ELISA IgG2a:IgG1 titers greater than or equal to 1:100, or (ii) by a ratio of the ELISA IgG2a:IgA titers greater than or equal to 1:100.

8. (Amended) The method of Claim 7, in which the Th1-type immune response is characterized either (i) by a ratio of the ELISA IgG2a:IgG1 titers greater than or equal to 1:10, or (ii) by a ratio of the ELISA IgG2a:IgA titers greater than or equal to 1:10.

9. (Amended) The method of Claim 8, in which the Th1-type immune response is characterized either (i) by a ratio of the ELISA IgG2a:IgG1 titers greater than or equal to 1:2, or (ii) by a ratio of the ELISA IgG2a:IgA titers greater than or equal to 1:2.

10. (Twice Amended) The method of Claim 5, in which the *Helicobacter pylori* antigen is selected from a preparation of inactivated *Helicobacter pylori* bacteria, a *Helicobacter pylori*

cell lysate, a peptide or a polypeptide from *Helicobacter pylori* in purified form, a DNA molecule comprising a sequence encoding a peptide or a polypeptide from *Helicobacter pylori* placed under the control of the elements necessary for its expression, and a vaccinal vector comprising a sequence encoding a peptide or a polypeptide from *Helicobacter pylori* placed under the control of the elements necessary for its expression.

11. (Amended) The method of Claim 10, in which the *Helicobacter pylori* antigen comprises the UreB or UreA subunit of a *Helicobacter pylori* urease.

12. (Amended) The method of Claim 10, in which the *Helicobacter pylori* antigen is a DNA molecule or a vaccinal vector comprising a sequence encoding the UreB or UreA subunit of a *Helicobacter pylori* urease.

14. (Amended) The method of Claim 5, in which the *Helicobacter pylori* antigen is administered by the strict systemic route.

15. (Amended) The method of Claim 5, in which the *Helicobacter pylori* antigen is administered by a systemic route selected from the subcutaneous route, the intramuscular route, and the intradermal route.

16. (Amended) The method of Claim 5, in which the *Helicobacter pylori* antigen is administered by a mucosal route followed by a parenteral route.

17. (Amended) The method of Claim 16, in which the *Helicobacter pylori* antigen is administered by a parenteral route, followed by a mucosal route, followed by a parenteral route, followed by a mucosal route.

18. (Amended) The method of Claim 5, in which the *Helicobacter pylori* antigen is administered in the dorsolumbar region of said mammal.

25. (Amended) A method of preventing or treating Helicobacter infection in a mammal, said method comprising in order the steps of:

mucosally administering an effective amount of a prophylactically or therapeutically effective *Helicobacter pylori* antigen to said mammal; and then

parenterally administering a *Helicobacter pylori* antigen to said mammal.

26. (New) The method of claim 25, in which more than one mucosal administration is carried out.

27. (New) The method of claim 25, in which more than one parenteral administration is carried out.

28. (New) The method of Claim 25, in which the mucosal administration is carried out to prime an immune response to said *Helicobacter pylori* antigen, and the parenteral administration is carried out to boost an immune response to said *Helicobacter pylori* antigen.

29. (New) The method of Claim 25, in which the mucosal administration is oral administration.

30. (New) The method of Claim 25, in which the parenteral administration is intramuscular administration or subcutaneous administration.

31. (New) The method of Claim 25, in which the *Helicobacter pylori* antigen is selected from a preparation of inactivated *Helicobacter pylori* bacteria, a *Helicobacter pylori* cell lysate, a peptide or a polypeptide from *Helicobacter pylori* in purified form, a DNA molecule comprising a sequence encoding a peptide or a polypeptide from *Helicobacter pylori* placed under the control of the elements necessary for its expression, and a vaccinal vector comprising a sequence encoding a peptide or a polypeptide from *Helicobacter pylori* placed under the control of the elements necessary for its expression.

32. (New) The method of Claim 31, in which the *Helicobacter pylori* antigen comprises the UreB or UreA subunit of a *Helicobacter pylori* urease.

33. (New) The method of Claim 31, in which the *Helicobacter pylori* antigen is a DNA molecule or a vaccinal vector comprising a sequence encoding the UreB or UreA subunit of a *Helicobacter pylori* urease.

34. (New) The method of Claim 25, in which a mucosal adjuvant selected from the group consisting of *Escherichia coli* heat labile enterotoxin (LT), cholera toxin (CT), *Clostridium*

difficile toxin, *Pertussis* toxin (PT), and combinations, subunits, toxoids, and mutants derived therefrom, is co-administered with the mucosally administered *Helicobacter pylori* antigen.

35. (New) The method of Claim 25, in which a parenteral adjuvant selected from the group consisting of alum, QS-21, DC-chol, and Bay is co-administered with the parenterally administered *Helicobacter pylori* antigen.